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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,853	03/30/2004	Susanne A. Paul	SIL.P0076	3441
30163	7590	03/27/2006	EXAMINER	
JOHNSON & ASSOCIATES PO BOX 90698 AUSTIN, TX 78709-0698			SHINGLETON, MICHAEL B	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/812,853

Applicant(s)

PAUL ET AL.

Examiner

Michael B. Shingleton

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 47-49, 51-55 and 57-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 47-49, 51-55 and 57-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

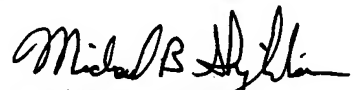
- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/1/05 2 sheets, 11/10/05 one sheet, 2/2/06 two sheets, 11/10/05 two sheets

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____


MICHAEL B. SHINGLETON
PRIMARY EXAMINER
ART UNIT 2817

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 47-49, 51-55 and 57-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawai et al. 5,994,963 of record (Kawai) in view of Nalbant 6,763,114 (Nalbant), Meiksin et al. 6,370,396 (Meiksin) and Gerfault 5,453,717 (Gerfault).

Figures 1 and 2 and the relevant text of Kawai discloses a conventional portable telephone arrangement otherwise known as a cellular telephone (See column 1, around line 10). (Note that the term “cellular” merely refers to “a geographical area (as a city) is divided into small sections each served by a transmitter of limited range so that any available radio channel can be used in different parts of the area simultaneously”. Thus being that every portable radiotelephone has limited range these phones can only operate in a limited cell or geographical area and thus are cellular in nature.) The arrangement of Kawai includes a transceiver 7, 8, an antenna 4 and an RF power amplifier 15. However, Kawai is silent on the details of the structure that makes up the power amplifier 15.

At least Figures 3 and 6B along with the relevant text of Nalbant discloses a CMOS based bridge amplifier device and method for operating the CMOS device. The device of Nalbant is primarily disclosed as being used for audio applications. However, this is merely one example of the intended use of Nalbant. The circuit of Nalbant also may be used in “applications requiring low power consumption and needing high power output”. The power amplifier of Kawai is one such use requiring low power consumption (portable telephone) and high power output (transmit.). As shown in Figure 6B of Nalbant, two CMOS pairs of transistors are provided for thereby forming the bridge power amplifier structure as claimed. The first CMOS pair is composed of Q1 and Q4. The second CMOS pair is composed of transistors Q2 and Q3 as is clearly illustrated in Figure 6B of Nalbant. Figures 6A and 6B in combination in Nalbant clearly shows that these pairs of switching devices are connected between a “voltage differential”. As recited in column 2, around line 9, the CMOS transistor pair Q1 and Q4 is turned on and off together as a unit. Such is also the case with the transistor pair Q2 and Q3. The switching of these pairs is done in an alternative manner, i.e. when Q1 and Q4 are “on” then the pair represented by Q2 and

Q3 are off. Element 10 and the inductances L1-L4 form an inductance between the switching devices of each respective pair of switching devices. Depending on the use alternative loads could be used as disclosed by Nalbant.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the amplifier structure of Kawai with that of Nalbant because as the Kawai reference is silent on the exact structure of the amplifier "15" of Kawai one of ordinary skill in the art would have been motivated to use any art-recognized equivalent amplifier structure such as the one taught by Nalbant.

Meiksin discloses that a bridge type amplifier is used to power an antenna so as to enable the supply of high current into the antenna without the need for a high voltage. Gerfault is another reference that teaches the use of a bridge-type amplifier as power amplifier for RF application wherein that bridge amplifier is used to power an antenna of a wireless device. Note elements Q1-Q4 and "A" of Gerfault.

Meiksin and Gerfault clearly attests to the fact that bridge amplifiers are commonly used for the power amplifier for powering an antenna in a wireless device, i.e. they are an art-recognized equivalent means for the providing of a power amplifier that powers an antenna. Accordingly, these references Meiksin and Gerfault also provides further motivation to one of ordinary skill in the art to make the obvious combination mentioned above involving the replacement of the amplifier 15 of Kawai with bridge amplifier structure like that of Nalbant and that is so as to provide for an efficient amplifier to power the antenna as taught by Meiksin and Gerfault.

Claims 65 and 66 recites the only two possibilities for the conductivity the pairs of switching transistors. In Nalbant the first transistor Q1 is a p-channel device and the second transistor Q4 is an n-channel device and thus the subject matter of claim 66 is met. However, forming the exact opposite with the first being the n-channel and the second being the p-channel device with an opposite supply voltage (voltage differential) is a well-known art-recognized equivalent form of the circuit. Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to have formed the first transistor from a n-channel and the second transistor from a p-channel since the examiner takes Official Notice of the equivalence of the use of the opposite conductivity types to form the circuit. In other words forming the circuit from an opposite conductivity is merely an art-recognized equivalent form of the circuit and accordingly the use of the opposite conductivity type for the circuit would have been obvious to one of ordinary skill in the art at the time of the invention was made. Note that art-recognized equivalence is a proper motivation. (See MPEP 2144.06, 2144.07 and 2144.03).

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Applicant's arguments with respect to claims of record have been considered but are moot in view of the new ground(s) of rejection. However, it is noted that in the section under "remarks" applicant states that claims 47-66 are pending in the present application. The copy of the claims submitted with this amendment states that claims 50 and 56 are cancelled. Thus it appears that claims 47-49, 51-55 and 57-66 are pending in the present application.

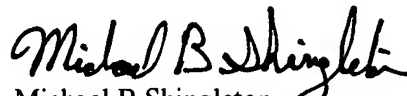
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael B. Shingleton whose telephone number is (571) 272-1770.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal, can be reached on (571)272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 and after July 15, 2005 the fax number will be 571-273-8300. Note that old fax number (703-872-9306) will be service until September 15, 2005.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MBS

March 3, 2006


Michael B Shingleton
Primary Examiner
Group Art Unit 2817